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TO

Name: Examiner Patricia Bianco Phone No.: 703-305-1482  
Firm: U.S. Patent and Trademark Office Date: February 5, 2004  
Group Art Unit 3762  
Fax No.: 703-872-9306  
Subject: U.S. Patent Application No. 09/534,038

FROM

Name: Michael W. Kim Phone No.: (202) 408-4449  
Fax # Verified by: MWK MD 878 # Pages (incl. this): 23  
Our File No.: 7883.0004-02

Confirmation Copy to Follow: N

Message:

Please find enclosed the following papers:

- (1) Amendment (9 pages);
- (2) Copies of Petition Under 37 C.F.R. § 1.48(b) filed March 4, 2003; Amendment and Response to Restriction Requirement filed March 4, 2003; and PTO date-stamped postcard indicating receipt of Petition and Amendment.

CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. § 1.8

I hereby certify that the attached Amendment (9 pages) is being transmitted by facsimile to facsimile no. 703-872-9306 at the U.S. Patent and Trademark Office on February 5, 2004.



Michael W. Kim  
Reg. No. 51,880

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0011418/013

**PLEASE STAMP TO ACKNOWLEDGE RECEIPT OF THE FOLLOWING:**

In re Application of: Scott J. WOLF et al.

Application No.: 09/534,038

Group Art Unit: 3762

Filed: March 24, 2000

Examiner: P. Bianco

For: LEFT VENTRICULAR CONDUITS TO CORONARY ARTERIES AND METHODS FOR  
CORONARY BYPASS

1. Transmittal Letter (2 pages)
2. Amendment and Response to Restriction Requirement with Appendix (10 pages)
3. Petition Under 37 C.F.R. §1.48(b) (2 pages)
4. Check in the amount of \$247.00 to cover the \$117.00 extra claims fee and \$130.00  
37 C.F.R. §1.48(b) petition fee

Dated: March 4, 2003

Docket No.: 7883.0004-02

STJ/eah - Mail Drop 654



(Due Date: 3/4/03)

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0011418/013

PATENT  
Customer No. 22,852  
Attorney Docket No. 7883.0004-02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
Scott J. WOLF et al. ) Group Art Unit: 3762  
Application No.: 09/534,038 ) Examiner: P. Bianco  
Filed: March 24, 2000 )  
For: LEFT VENTRICULAR CONDUITS )  
TO CORONARY ARTERIES AND )  
METHODS FOR CORONARY )  
BYPASS )

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Commissioner for Patents  
Washington, DC 20231

Sir:

AMENDMENT AND RESPONSE TO RESTRICTION REQUIREMENT

Prior to the examination of the above application, please amend this application  
as follows:

IN THE INVENTORSHIP:

Please delete the following named inventors from this application:

Scott J. WOLF; Greg R. FURNISH; Todd A. HALL; David Y. PHELPS; Nancy M.

BRIEFS; William SANTAMORE; Daniel BURKHOFF; Simon FURNISH; Stephen

EVANS; Roger D. KAMM; Richard RENATI; Gerald MELSKY; and Eun Bo SHIM.

IN THE SPECIFICATION:

Please amend the specification by deleting the heading and the paragraph at  
page 1, lines 4-11, and insert at page 1, after the title, the following heading:

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--Cross-Reference to Related Applications--

IN THE CLAIMS:

Please delete claims 1-14, without prejudice or disclaimer, amend claim 15, and add new claims 16-47, as follows:

15. (Amended) A method of providing direct blood flow between a heart chamber and a coronary vessel, the method comprising the steps of:  
inserting an instrument through an anterior wall of the coronary vessel;  
further inserting the instrument through a posterior wall of the coronary vessel and a heart wall between the heart chamber and the coronary vessel to form a passageway in the heart wall; and  
inserting a nonrigid implant within the passageway.
16. (New) The method of claim 15, wherein the implant includes a stent.
17. (New) The method of claim 15, further comprising expanding the implant in the passageway.
18. (New) The method of claim 17, wherein expanding the implant includes expanding the implant from a collapsed configuration.
19. (New) The method of claim 15, wherein the passageway in the heart wall is formed via one of lasing, drilling, and boring.

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20. (New) The method of claim 15, wherein inserting the instrument includes inserting an incising instrument.
21. (New) The method of claim 15, wherein inserting the implant includes inserting an implant carrying a substance for delivery to the heart wall.
22. (New) The method of claim 21, wherein the substance is chosen from angiogenesis factors and nucleic acid instructions for angiogenesis factors.
23. (New) The method of claim 21, wherein the substance is for at least one of generating, stimulating, and enhancing blood vessel formation.
24. (New) The method of claim 15, wherein inserting the implant in the passageway includes inserting the implant via a catheter.
25. (New) The method of claim 24, further comprising advancing the catheter to the passageway via the heart chamber.
26. (New) The method of claim 15, further comprising removing the instrument from the heart wall prior to inserting the implant.
27. (New) The method of claim 15, further comprising advancing the implant past the posterior wall of the coronary vessel and into the passageway.

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28. (New) The method of claim 27, further comprising advancing the implant past the anterior wall of the coronary vessel.

29. (New) A method of providing direct blood flow between a heart chamber and a coronary vessel, the method comprising the steps of:

inserting an instrument through an anterior wall of the coronary vessel;

further inserting the instrument through a posterior wall of the coronary vessel and a heart wall between the heart chamber and the coronary vessel to form a passageway in the heart wall; and

inserting an implant within the passageway,

wherein the implant does not extend substantially along an axial direction of the vessel.

30. (New) The method of claim 29, wherein the implant includes a stent.

31. (New) The method of claim 29, further comprising expanding the implant in the passageway.

32. (New) The method of claim 31, wherein expanding the implant includes expanding the implant from a collapsed configuration.

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33. (New) The method of claim 29, wherein the passageway in the heart wall is formed via one of lasing, drilling, and boring.

34. (New) The method of claim 29, wherein inserting the instrument includes inserting an incising instrument.

35. (New) The method of claim 29, wherein inserting the implant includes inserting an implant carrying a substance for delivery to the heart wall.

36. (New) The method of claim 35, wherein the substance is chosen from angiogenesis factors and nucleic acid instructions for angiogenesis factors.

37. (New) The method of claim 35, wherein the substance is for at least one of generating, stimulating, and enhancing blood vessel formation.

38. (New) The method of claim 29, wherein inserting the implant in the passageway includes inserting the implant via a catheter.

39. (New) The method of claim 38, further comprising advancing the catheter to the passageway via the heart chamber.

40. (New) The method of claim 29, further comprising removing the instrument from the heart wall prior to inserting the implant.

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41. (New) The method of claim 29, further comprising advancing the implant past the posterior wall of the coronary vessel and into the passageway.

42. (New) The method of claim 41, further comprising advancing the implant past the anterior wall of the coronary vessel.

43. (New) A method of providing direct blood flow between a heart chamber and a coronary vessel, the method comprising the steps of:

providing a medical instrument carrying an implant on an external portion of the instrument;

puncturing an anterior wall and a posterior wall of a coronary vessel via the medical instrument;

inserting the instrument into a heart wall between the heart chamber and the coronary vessel; and

placing the implant into the heart wall.

44. (New) The method of claim 43, wherein the implant comprises an absorbable plug.

45. (New) The method of claim 43, further comprising allowing the implant to be absorbed by the heart wall.

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46. (New) The method of claim 43, further comprising removing the medical instrument.

47. (New) The method of claim 43, wherein the medical instrument includes a thoroscope.

#### REMARKS

By this Amendment, claims 1-14 have been canceled, without prejudice or disclaimer. Applicants reserve the right to pursue the subject matter of claims 1-14 in another application. In addition, claim 15 has been amended and claims 16-47 have been added. Support for the amendment to claim 15 and new claims 16-47 can be found in the specification at least at pages 26-30 and in Figs. 10A-10C, 16C-16F, and 16J-16N, for example.

Also by this Amendment, the inventorship has been amended to delete certain inventors whose inventions are no longer being claimed as a result of the election made herein in response to the restriction requirement set forth in the Office Action dated February 4, 2003. A Petition under 37 C.F.R. § 1.48(b) also is being submitted herewith requesting the deletion of the inventors whose inventions are no longer being claimed in this application. The sole inventor of the subject matter currently being claimed in this application is Peter J. WILK. Applicants respectfully request that the inventorship of this application be amended as set forth above.

Moreover, the undersigned representative recently became aware of two additional individuals, Marvin Guiles and Mark Bowen, who contributed to some of the subject matter disclosed in this application, but not currently claimed. Since Peter Wilk

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is the only inventor of the currently claimed subject matter, Applicants will not at this time add these two individuals to this application. If at a later date an application is filed claiming subject matter to which the two additional individuals contributed, Applicants will file appropriate papers relating to inventorship of that application.

Upon review of this application, minor typographical errors in the specification were found. The specification has been amended to correct these errors. An Appendix which shows the current state of the specification, as amended herein and by the amendment in the Transmittal Letter filed with this application and by the Supplemental Preliminary Amendment filed August 31, 2000, is attached hereto. The Appendix also shows the changes that have been made to claim 15 as a result of this Amendment.

In the Office Action dated February 4, 2003, the Examiner required a restriction under 35 U.S.C. §121 between the following claim groups:

- I. Claims 1-7, characterized by the Examiner as being drawn to a shunt having apertures and a diversion tube;
- II. Claim 8, characterized by the Examiner as being drawn to a conduit device having vessel disc members attached;
- III. Claim 9, characterized by the Examiner as being drawn to a stent having a movable flap on the end for blood control;
- IV. Claim 10, characterized by the Examiner as being drawn to a conduit with an access port and graft segment;
- V. Claim 11, characterized by the Examiner as being drawn to a shunt having a seal portion;

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VI. Claim 12, characterized by the Examiner as being drawn to a stent having varying wall thickness;

VII. Claim 13, characterized by the Examiner as being drawn to a stent having a curved conduit with a spiral flow path;

VIII. Claim 14, characterized by the Examiner as being drawn to a stent having a vortex chamber and a tangential flow port; and

IX. Claim 15, characterized by the Examiner as being drawn to a method for inserting a stent using an instrument.

In response to the restriction requirement, Applicants elect to prosecute claim group IX. Claim 15, as amended, as well as new claims 16-47 correspond to this election.

Applicants respectfully request entry of this Amendment and the examination of claims 15-47.

If there is any fee due in connection with the filing of this response that is not already accounted for, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: March 4, 2003

By: Susanne T. Jones  
Susanne T. Jones  
Reg. No. 44,472

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## APPENDIX

Applicants submit that in view of the various specification amendments that have been filed in this application, the specification at page 1, after the title and before the heading "Background of the Invention," presently reads as follows:

### Cross-Reference to Related Applications

This is a continuation of application Serial No. 09/369,039, filed August 4, 1999, which is a continuation-in-part of application Serial No. 09/016,485, filed January 30, 1998 and a continuation-in-part of PCT application Serial No. PCT/US99/03484, filed February 17, 1999, and which claims the benefit of U.S. provisional application nos. 60/099,691 and 60/099,720, each filed September 10, 1998; U.S. provisional application no. 60/099,767, filed September 10, 1998; and U.S. provisional application no. 60/104,397, filed October 15, 1998, all of which are incorporated herein by reference.

### Changes to claim 15:

15. (Amended) A method of providing direct blood flow between a heart chamber and a coronary vessel, the method comprising the steps of:

inserting an instrument through an anterior wall of the coronary vessel [to form an anterior wall aperture];

further inserting the instrument through a posterior wall of the coronary vessel and a heart wall between the heart chamber and the coronary vessel to form a passageway in the heart wall; and

inserting a nonrigid implant [stent] within the passageway.

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PATENT  
Customer Number 22,852  
Attorney Docket No. 7883.0004-02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
 )  
Scott J. WOLF et al. ) Group Art Unit: 3762  
 )  
Application No.: 09/534,038 ) Examiner: P. Bianco  
 )  
Filed: March 24, 2000 )  
 )  
For: LEFT VENTRICULAR CONDUITS )  
TO CORONARY ARTERIES AND )  
METHODS FOR CORONARY )  
BYPASS )

OFFICE OF PETITIONS  
Assistant Commissioner for Patents  
Box DAC  
Washington, DC 20231

Sir:

PETITION UNDER 37 C.F.R. §1.48(b)

Applicants hereby petition to correct inventorship pursuant to 37 C.F.R. §1.48(b).

The fee set forth in 37 C.F.R. §1.17(i) is submitted herewith.

Applicants respectfully request that the following originally-named inventors be deleted from the instant application: Scott J. WOLF; Greg R. FURNISH; Todd A. HALL; David Y. PHELPS; Nancy M. BRIEFS; William SANTAMORE; Daniel BURKHOFF; Simon FURNISH; Stephen EVANS; Roger D. KAMM; Richard RENATI; Gerald MELSKEY; and Eun Bo SHIM. Applicants hereby acknowledge that inventions of these individuals are no longer being claimed in the instant application.

The inventive entity of the instantly claimed invention should thus be as follows:

Peter J. WILK.

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Application No.: 09/534,038  
Customer No. 22,852

If there are any other fees due in connection with the filing of this Petition, please charge the fees to our Deposit Account No. 06-0916. If a fee is required for an extension of time under 37 C.F.R. §1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

By: Susanne T. Jones

Susanne T. Jones  
Reg. No. 44,472

Dated: March 4, 2003

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